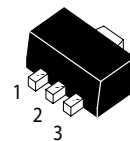


PNP Plastic-Encapsulate Transistor

 Lead(Pb)-Free

1. BASE
2. COLLECTOR
3. EMITTER



SOT-89

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current Continuous	I_C	-1.0	A
Total Device Dissipation $T_A=25^{\circ}\text{C}$	P_D	500	mW
Junction Temperature Range	T_J	+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Device Marking

BCX53=AH, BCX53-10=AK, BCX53-16=AL

OFF CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage, $I_C = -100\mu\text{A}$, $I_E = 0$	$V(BR)_{CBO}$	-	-100	V
Collector-Emitter Breakdown Voltage, $I_C = -10\text{mA}$, $I_B = 0$	$V(BR)_{CEO}$	-	-80	V
Emitter-Base Breakdown Voltage, $I_E = -10\mu\text{A}$, $I_C = 0$	$V(BR)_{EBO}$	-	-5.0	V
Collector Cut-off Current, $V_{CB} = -30\text{V}$, $I_E = 0$	I_{CBO}	-	-0.1	μA
Emitter Cut-off Current, $V_{EB} = -5.0\text{V}$, $I_C = 0$	I_{EBO}	-	-0.1	μA

ELECTRICAL CHARACTERISTICS ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted) (Continued)

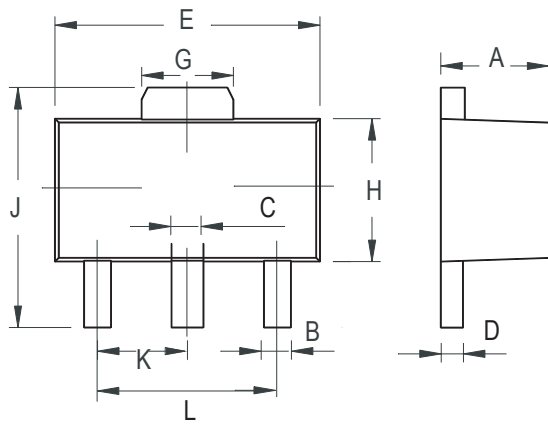
Characteristics	Symbol	Min	Typ	Max	Unit
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ON CHARACTERISTICS

DC Current Gain $V_{CE} = -2.0\text{V}$, $I_C = -150\text{mA}$	BCX53	h_{FE1}	63	-	250	
	BCX53-10		63	-	160	
	BCX53-16		100	-	250	-
$V_{CE} = -2.0\text{V}$, $I_C = -5.0\text{mA}$		h_{FE2}	63	-	-	
$V_{CE} = -2.0\text{V}$, $I_C = -500\text{mA}$		h_{FE3}	40	-	-	
Collector-Emitter Saturation Voltage $I_C = -500\text{mA}$, $I_B = -50\text{mA}$		$V_{CE(sat)}$	-	-	-0.5	V
Base-Emitter Voltage $V_{CE} = -2.0\text{V}$, $I_C = -500\text{mA}$		$V_{BE(ON)}$	-	-	-1.0	V
Transition Frequency $V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$, $f = 100\text{MHz}$		f_T	50	-	-	MHz

SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100